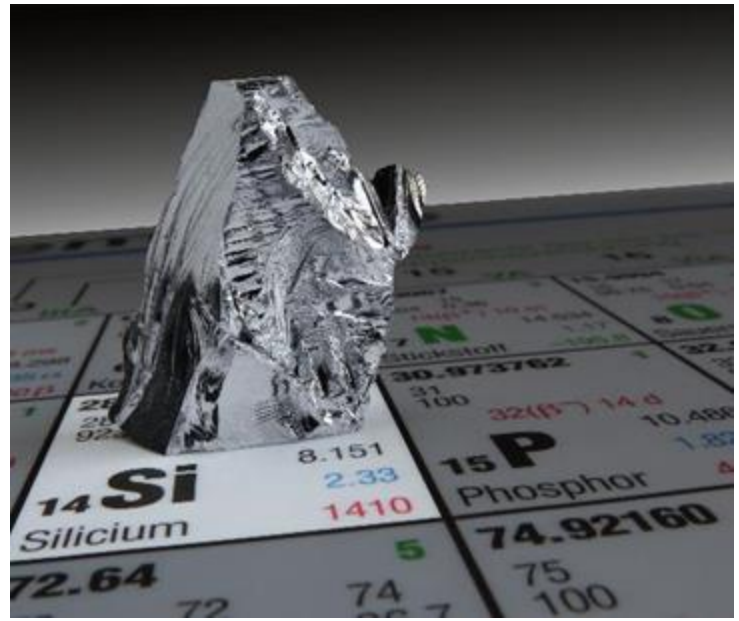
HPQ SILICON



GREEN ENGINEERED SILICA AND SILICON MATERIALS TECHNOLOGY

HPQ LISTED TSXV

OTCQB HPQFF

— DISCLAIMERS

This presentation includes certain

FORWARD-LOOKING STATEMENTS

All statements (other than statements of historical fact included herein), including, without limitation, statements regarding future plans and objectives of the company, are forward-looking statements that involve various risks, assumptions, estimates and uncertainties, and any or all of these future plans and objectives may not be achieved.

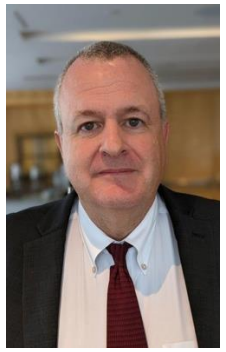
These statements reflect the current expectations or beliefs of HPQ Silicon Inc. ("the Company") and are based on information currently available to the Company as of **August 29, 2024.** There can be no assurance that such statements will prove to be accurate, and actual results and future events could differ materially from those anticipated in such statements. All forward-looking statements in this presentation are qualified by these cautionary statements and the risk factors described above. Furthermore, all such statements are made as of the date this presentation is given.

An investment in the Company is speculative due to the nature of the its business. The ability of the Company to carry out its plans as described in this presentation depends on obtaining the required capital. There is no assurance that the Company will be able to raise the capital required successfully or to complete each of the growth initiatives described. Investors must rely upon the ability, expertise, judgment, discretion, integrity and good faith of the management and Board of the Company.

The Corporation is a technology company engaged in green engineering processes that is: 1) Developing the Fumed Silica Reactor (FSE), a new plasma process that will allow a direct Quartz to Fumed Silica transformation; 2) Aiming to become a manufacture of green Silicon anode materials; 3) Working with NOVACIUM SAS developing a compact process for the production of green hydrogen via hydrolysis of silicon and other materials and 4) developing the PUREVAP™ Quartz Reduction Reactor (QRR), a new carbothermic process to transform Quartz into green Silicon (patent granted in the United States & pending in other jurisdictions

The terms Silicon, Silicon Metal and Si are used interchangeably. Metallurgical Grade Silicon or MG Si refers to Silicon Metal of a purity between 98.0% Si and 99.5% Si. High Purity (HP Si) or Upgraded Metallurgical Grade Silicon (UMG Si) refers to Silicon Metal of a purity between 99.9% Si and 99.99% Si.

HPQ KEY MANAGEMENT & DIRECTORS



Bernard J Tourillon, BAA. MBA CHAIRMAN, PRESIDENT, CEO AND DIRECTOR

Over the last 35 years, Mr. Tourillon has held senior level executive positions with extensive finance, accounting, marketing, administration, and business development experiences in diverse industries including banking, manufacturing, exploration, mining, and technologies companies. Since joining HPQ Silicon in 2006, he has participated in fundraising activities and financial transactions worth over $75 million.

Since 2015, he has been leading the transformation of HPQ Silicon from a simple High Purity Quartz and Gold exploration Company into a green tech focused Corporation.

Mr. Tourillon was instrumental in securing the partnership with PyroGenesis Canada Inc, a world leader in plasma technology and high temperatures processes, and the creation of NOVACIUM SAS – a French associated company of HPQ responsible for groundbreaking R&D in the battery domains.

Francois Rivard, VICE PRESIDENT AND CHIEF FINANCIAL OFFICER

Over the last 35 years, Mr. Rivard has held senior accounting positions in diverse industries including banking, manufacturing, exploration, mining, and technologies companies. He joined HPQ Silicon in 2006.

Since 2015, he has been working with HPQ CEO transform HPQ Silicon from a simple High Purity Quartz and Gold exploration Company into a green tech focused Corporation.

Daryl Hodges H. BSc, M.Sc., INDEPENDENT LEAD TECHNICAL DIRECTOR

Mr. Hodges has experience in the mining industry and in the capital markets. In the last 25 years, Mr. Hodges has participated in fundraising activities and financial transactions worth over $4 billion.

Since 2015, he has been participating in the transformation of HPQ Silicon from a gold exploration company into a Specialty Silicon company, first as an advisor and subsequently as a board member. On the Board of Directors his roles include Audit Committee and Technical Committee participation.

Mr. Hodges has a BSc and MSc degree in Earth Science.

EXECUTIVE SUMMARY: MULTITUDE OF EVERYDAY USES MATERIAL WITH NO SUBSTITUTE

Fumed Silica

Product:	Specialized powder additive with large industrial uses
Market:	US$ 2 B (CAGR 5.5%) [1]
Opportunity:	Traditional process has Large muti billion $ Capex Low EBITDA margins ~ 20% Massive CO_2 footprint Barriers to entry very high
Solution:	The FSR, a new proprietary, low Capex (93% less) low Opex (80% less) process EBITDA margins from 75% to 91%, 3.74 to 4.55 X higher than traditional process CO_2 footprint 99% less Eliminates barriers to entry

Ready for market end 2024 – start 2025

Silicon Metal (Si)

Product:	Specialized metalloid used in electronics, solar panels, auto alloys & industrial feedstock
Market:	US$ 12B 2021 – 2030 $20B [2]
Opportunity:	Outdated process requiring 6 t of feedstock to make 1 t Si Scalable by 30K - 50K TPY Multi-steps to make 2N-4N Si Highly variable costs Large CO_2 footprint
Solution:	The QRR, a new, one step, proprietary process to make 3N to 4N Si (Battery grade) using 25% less feedstock Scalable by range of 2K TPY Zero CO_2 footprint Potential EBITDA >50% when using capture CO_2 to make green synthetic fuels

Ready for commercialisation: 2025

Silicon Battery Materials

Product:	Engineered silicon oxide (SiOx) based anode materials for Li-Ion-graphite batteries
Market:	US$ 38 B by 2030 [3]
Opportunity:	Legacy SiOx manufacturing Inefficient batch process that needs multiple steps from Si to SiOx to Engineered SiOx high Opex / High Capex
Solution:	A new proprietary semi continuous process to go from Si to SiOx and then to Engineered Silicon base anode material Same Capex / lower Opex Scalable process Using QRR Si as feedstock will reduce CO_2 footprint

Ready for commercialisation: 2025

Autonomous H2 Production

Product:	Autonomous and on demand Hydrogen production
Market:	US$ 648 B by 2030 [4]
Opportunity:	Traditional Hydrogen supply chain is expensive, technically challenging, and dangerous Capex (Billions) High Opex Massive barriers to entry
Solution:	A new hydrogen pressurized autonomous production system that uses a chemical process to liberate Hydrogen from specific low-cost, low carbon and non-hazardous alloys

Ready for commercialisation: 2025

UPCOMING CATALYSTS

01. GREEN FUMED SILICA INITIATIVE

- Finalized pre-offtake agreement with Evonik Corporation ✓
- Start Producing Fumed Silica: Q3 2024
- Operating FSR and replicating lab results at scale: H2 2024
- H2 2024: Send samples to third Parties, continue collaboration on material improvement with parties under NDA
- End 2024 - finalize Offtake agreement or other transaction (Joint Development or Collaboration Agreements) for first 1k TPY commercial plant

02. ENGINEERED SILICON BATTERIES MATERIAL

- Demonstrating our control of the industrial process needed to make commercially our engineered Silicon material by continuing:
  - Making 18650 industrial batteries using our engineered Silicon
  - Testing and comparing the performance of these batteries versus similar batteries made only with graphite
  - Improving the performance of our engineered SiOx batteries

03. GREEN HYDROGEN ON DEMAND WITHOUT ELECTRICITY INITIATIVE

- Building a first prototype for commercialization of Novacium autonomous process for making hydrogen via hydrolysis

HPQ BUSINESS STRATEGY

Centered on:

- Developing multiple new scalable processes, perfect for customized solutions
  - Processes with lower Capex and Opex and/or high margin potential
  - Processes that can be brought to production and grown organically by a company our size
  - Processes with Low carbon footprint – reducing GES emissions and carbon taxes
- Maintaining control of IP directly or through exclusive licences, while outsourcing as much as feasible development work to stay low-cost and agile
- Maximize utilization of none equity base financing

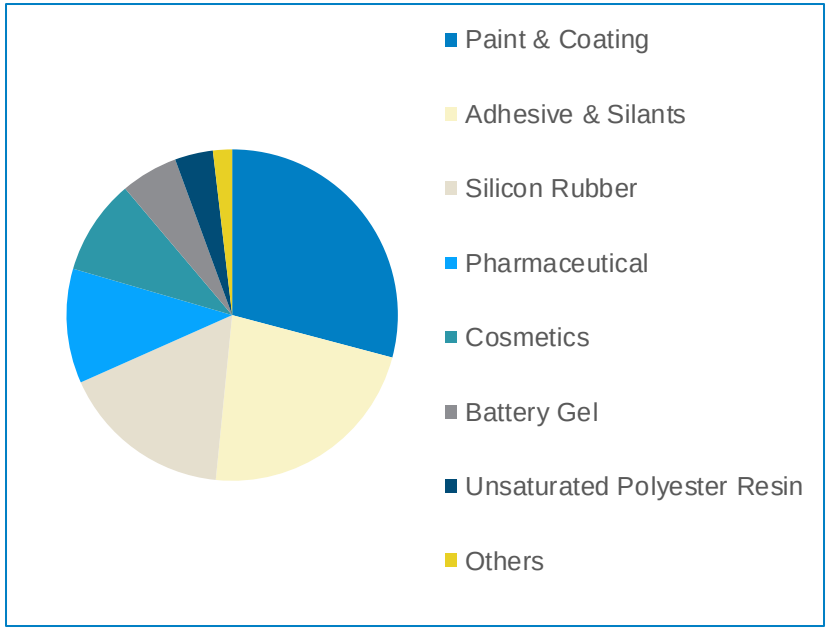
	Million
Indicative 12 months rolling budget	
General & Administration (12 months)	$ 0.8
Public Co fees (Audit-Legal-Trust-AGM-Mailing) (12 months)	$ 0.8
Novacium Capital Increase (One Time)	$ 1.5
Silicon for Batteries and Hydrogen R&D (12 months)	$ 1.4
Fumed Silica project (12 months)	$ 1.0
QRR Project minimum	$ 0.250
One-time legal fees	$ 0.250
TOTAL	$ 6.0

FUMED SILICA MARKET – HPQ NEAR PRODUCTION PROPOSAL

- Fumed Silica is a specialized industrial powder with huge surface area
- Used as a thickener, anti-cake, anti-settling, and thixotropic (ketchup) agent
- Used in various industries, there are no substitutes – see chart
- The primary driver of the fumed silica market is increased demand from the major end-use industries
- Environmental issues, complexity, and cost associated with conventional manufacturing processes are hindering market growth
- HPQ is developing a process that solves all these in one step

► Key market players: Evonik Industries (Germany), Cabot Corporation (U.S.) Wacker Chemie AG (Germany), and Tokuyama Corporation (Japan) [1]

Fumed Silica Market (%) by Industry



Source: MRFR Analysis

In 2023, Fumed silica sales reached US$1.9 billion and is expected to grow at a rate of 5.5% CAGR [2]

- This translates to approximatively 16,000 tonnes of new demand per year, every year
- Canada does not produce Fumed Silica, annual consumption about 24,000 tonnes [1]
- With the push toward onshoring, North American demand is expected to grow substantially

CONVENTIONAL FUMED SILICA PROCESSES:

MULTI STEPS – CAPITAL INTENSIVE – LOW MARGIN – GENERATES TOXIC GAS – MASSIVE CO_2 FOOTPRINT

STEP 1

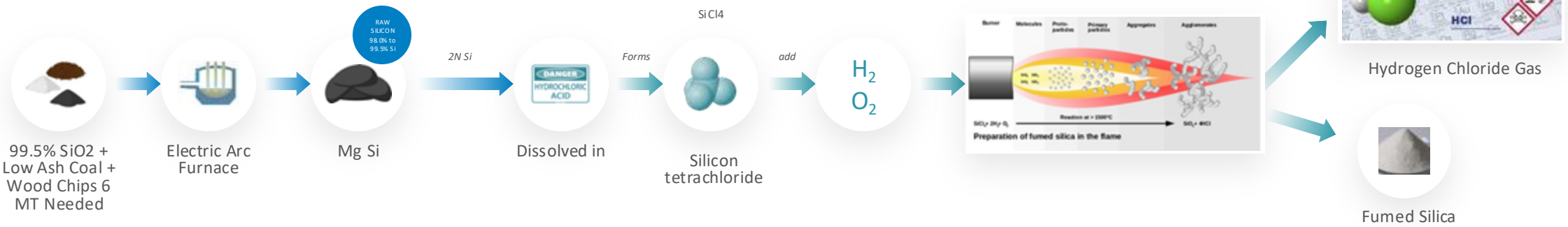
QUARTZ (SiO2) TO SILICON (Si)

STEP 2

SILICON (Si) TO SILICON TETRACHLORIDE (SiCL4)

STEP 3

SILICON TETRACHLORIDE (SiCL4) TO FUMED SILICA (SiO2)



99.5% SiO2 + Low Ash Coal + Wood Chips 6 MT Needed

Electric Arc Furnace

Mg Si

Dissolved in

Silicon tetrachloride

Hydrogen Chloride Gas

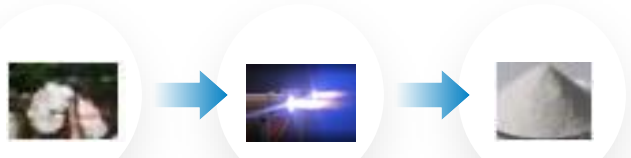
Fumed Silica

HPQ SILICA POLVERE INC ("HSPI") FUMED SILICA PROCESS – A UNIQUE OPPORTUNITY

ONE STEP – LOW CAPEX – HIGH MARGIN – NO CHEMICAL NEEDED – MININAL CO_2 FOOTPRINT

QUARTZ (SiO2) TO FUMED SILICA

FUMED SILICA REACTOR



Quartz SiO2

Fumed Silica Reactor

Fumed Silica

Newly updated data (August 2024) indicate:

HSPI FSR Energy Requirements to produce fumed silica at a 1K TPY commercial scale

- Now at between 8 and 12 kWh per Kg [1], compared to previous estimates of 10 to 15 kWh [2]
- Now 92% lower than the 100 to 120 kWh required by conventional processes [3]

HSPI FSR Carbon Footprint

- Reduced by 99.9% compared to traditional processes, which typically produce 8 to 17 kg of CO_2 per kg of fumed silica [3]

HPQ POLVERE FUMED SILICA REACTOR (FSR): A PARADIGM SHIFT IN FUMED SILICA

HPSI FSR COMMERCIALIZATION STRATEGY

Begin with a 1,000 TPY Fumed Silica Reactor, then scale up capacity in 1,000 TPY increments

A DISRUPTIVE PROCESS

Key Disruptive Matrix

- Based on internal scoping study updated in August 2024 and adjusted following PyroGenesis's option exercise

	FUMED SILICA MANUFACTURING							
	CONVENTIONAL PROCESSESS		HSPI FUMED SILICA REACTOR		HSPI FUMED SILICA REACTOR		DISRUPTIVE ADVANTAGES VS CONVENTIONAL PROCESSESS	
	August 2024		January 2024		August 2024 update		As of August 2024	
RANGE	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
Energy Consumption Range (kWh / Kg of Fumed Silica)	100 [4]	120 [4]	10 [2]	15 [2]	8 [3]	12 [3]	90% Less	92% Less
GHG Impact (Kg CO2 eq / Kg of Fumed Silica)	8 [4]	17 [4]	1.00 [10]	2.50 [11]	0.0136 [5]	0.0204 [12]	99.8% Less	99.9% Less
Canadian Carbon Taxes (CAD$80 per tonne released [13])	$ 640	$ 1,360	$ 80	$ 200	$ 1.09	$ 96	$ 638 Less	$ 1,264 Less
European Carbon Taxes (90€ per tonne released [14])	€ 720	€ 1,530	€ 90	€ 225	€ 1.22	€ 108	€ 718 Less	€ 1,422 Less
HCl Production (Kg / Kg Fumed Silica)	2.4 [15]		NIL		NIL		NO HCl GAZ	
EBITDA MARGINS	20% [16]		61%	65%	75%	91%	3.74 to 4.55 BETTER [17]	

Key CO_2 Reduction Matrix

- For Canada, adopting HPSI FRS could result in a reduction of CO_2 emissions of approximatively 191,500 to 379,000 tonnes per year [18]
- For Europe, adopting HPSI FRS could result in a reduction of CO_2 emissions of approximatively 734,000 to 1,453,6000 tonnes per year [19]
- This is equivalent to removing between approximately 45,477 to 345,817 cars from the road annually [20]

INDICATIVE OVERVIEW OF FINANCIAL POTENTIAL OF HPQ FSR PROCESS [1]

QUICK US$ PRO FORMA OF POTENTIAL REVENUE MODEL PER 1K TPY FSR

MATERIAL PRODUCED	A150		A200		A300	
SALES US$	$ 5,000,000		$ 8,000,000		$ 10,000,000	
PYR ROYALTIES	$ -		$ -		$ -	
GROSS SALES	$ 5,000,000		$ 8,000,000		$ 10,000,000	
	WORST CASE	BEST CASE	WORST CASE	BEST CASE	WORST CASE	BEST CASE
COST TO MAKE FS	$ 1,260,000	$ 900,000	$ 1,260,000	$ 900,000	$ 1,260,000	$ 900,000
EBITDA	$ 3,740,000	$ 4,100,000	$ 6,740,000	$ 7,100,000	$ 8,740,000	$ 9,100,000
EBITDA Margin	75%	82%	84%	89%	87%	91%

KEY ASSUMPTIONS

Material BET Characteristics	A150	A200	A300
Selling price US$/Kg [1]	$ 5.00	$ 8.00	$ 10.00
US$ Costs to build a 1,000 TPY			
Plant Equipment [2]	$ 10,000,000.00		
Building and Other [3]	$ 5,000,000.00		
TOTAL	$ 15,000,000.00		

KEY ASSUMPTIONS

(1) Does not assume any premium for Low carbon nature of the material

(2) Building to be size to accommodate 4 - 1,000 TPY units

Canadian market + new demand is sufficinecy large to accomade > 10 HSPI FSR units

There is room in the market for HSPI to BUILD 50 units

	WORST CASE	BEST CASE
US$ Estimated cost to produced by KG [4]	$ 1.26	$ 0.90

HPQ SILICON

FUMED SILICA INDICATIVE TIMELINE: FAST TRACK TO COMMERCIALIZATION

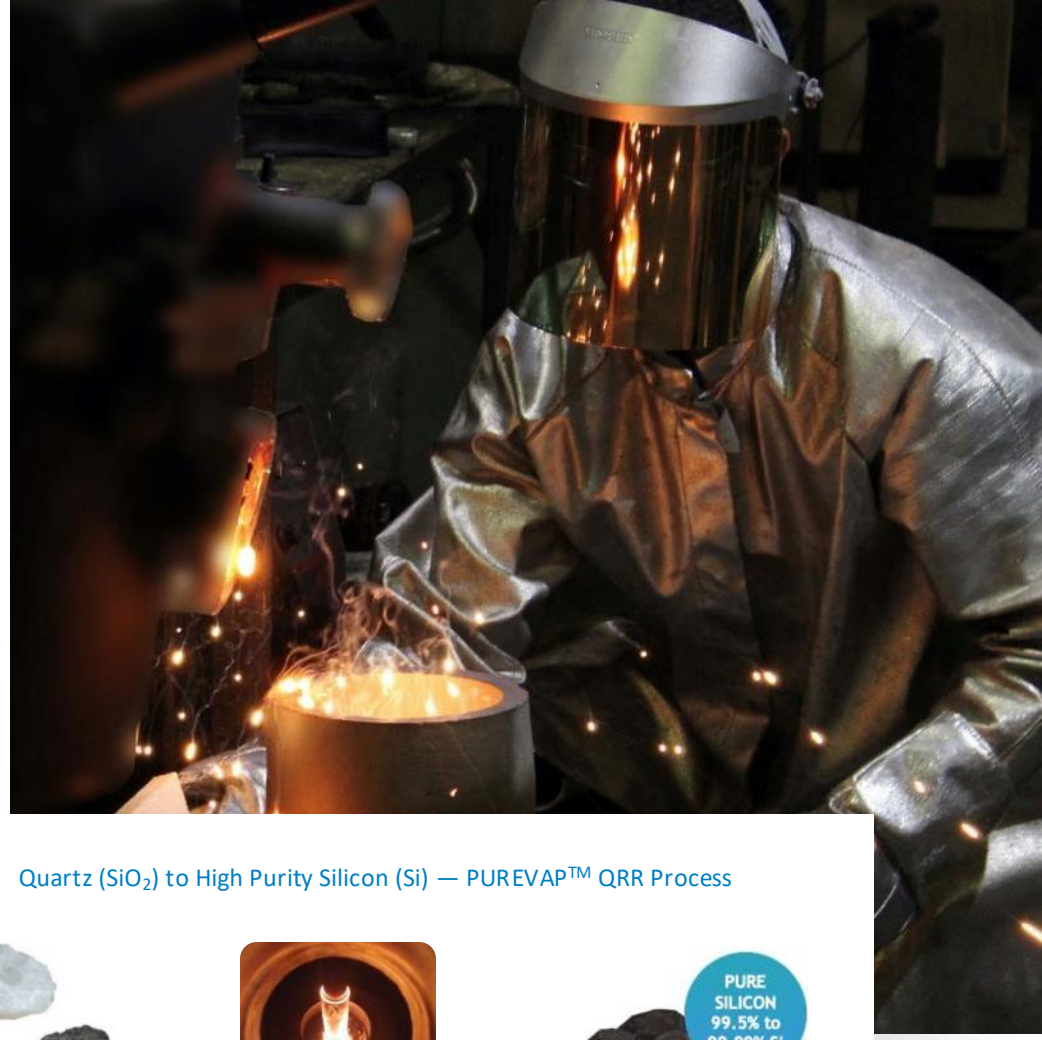
PROJECT	2024		2025		2026	2027
FUMED SILICA REACTOR (FSR)	Engineering – Construction – Commissioning of FSR Pilot Plant	FSR Pilot plant testing & validation of technology	Fumed Silica production using the 50 TPY pilot plant			Fumed Silica production from our first of many 1,000 TPY FSR plants
			Engineering studies regarding building 1,000 TPY FSR	All aspects related to the Construction – Commissioning of 1000 TPY FSR commercial plants		

FUMED SILICA INITIATIVE UPCOMING CATALYSTS

- Finalized pre-offtake agreement with Evonik Corporation ✓
- Start producing Fumed Silica: Q3 2024
- Operating FSR under a batch protocol, replicating lab – scale results: H2 2024
  - ✓ Produce materials with surface areas between 150 – 200 m2/g
- Send samples to third Parties under NDA, continue offtake / collaboration discussions: H2 2024
- Operate FSR under semi-continuous conditions, target 200kg of commercial-grade fumed silica: 2024
- Optimize FSR to target food/pharma grade fumed silica - surface area exceeding 300 m2/g
  - ✓ Used in 'beauty and personal care' products—will drive increase demand, projected to constitute 30% of the entire Fumed Silica market by 2032 [1].
- Finalize a first Offtake agreement or other transaction to build an initial first 1,000 TPY FSR plant: 2024

HPQ SILICON

THE BEGINNING: PUREVAP™ QRR
"Silicon Metal in one step"



HISTORIC SUCCESS:

- Successful scaling up production by 2,500X from PUREVAP™ Gen2 QRR.
- Successful one-step production of Battery Grade Silicon (>99.9%, or 3N+)
- Successful semi-continuous production and silicon metal pours
- Success using 25% less feedstock than conventional processes
- Variety of products: MG Si (98.5% to 99.5%), 2N, and 3N+

The QRR Reactor has proven its capability to produce 3N + silicon in one step

New focus:

- **Using QRR feedstock for value – add downstream products**
- **QRR unique pure carbon off-gas capture capability allow generation of second revenue stream from converting CO(g) into green synthetic fuel**

FUTURE TRENDS:

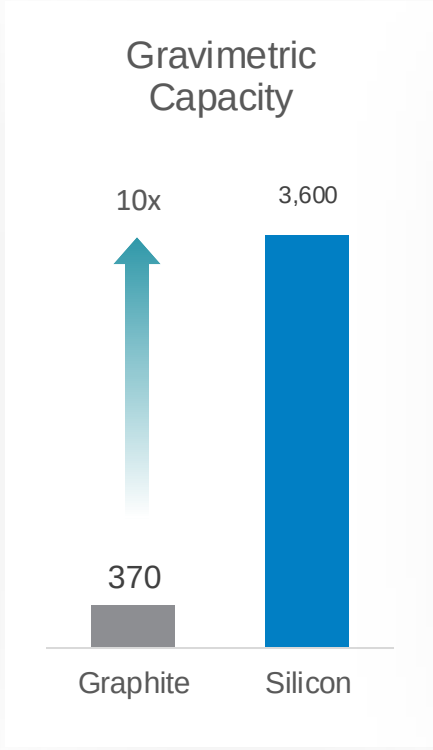
- 3N & 4N purity silicon as feedstock to make batteries grade SiOx material
- Transforming SiOx into engineered silicon base anode material that can be easily mix to graphite, creating a composite material capable of improving battery performance

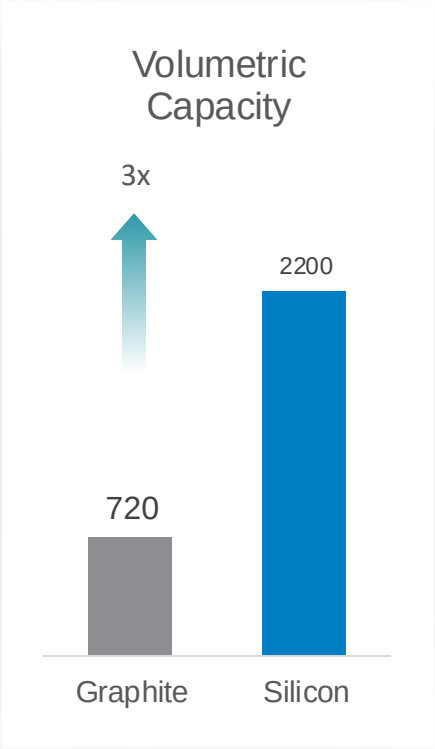
Quartz (SiO_2) to High Purity Silicon (Si) — PUREVAP™ QRR Process

SiO_2 98.5% + Clean Coal 4,5 MT Needed → PUREVAP QRR Reactor → Energy Consumption : 13,000 kWh needed to produce 1 MT

SILICON-BASED BATTERY ANODES: A HUGE OPPORTUNITY

- Rechargeable Battery and EV Demand is growing exponentially & Performance Improvements are Required
- Resulting battery raw material demand adds supply stress
- Graphite:
  - Is the largest (by %) key mineral in an EV battery
  - Demand exceeds supply for the first time in 2022 [1]
  - Deficit projected to grow to 8M tonnes by 2040 [2]
- Replacing a small percentage (5 to 10%) [3] of graphite in the anode chemistry with silicon-based (SiO_x) anodes material could:
  1. Improve battery performance
  2. Addresses the ongoing graphite deficit





HPQ SILICON – NOVACIUM ENGINEERING SILICON FOR BATTERY ANODES

HPQ and Novacium are working on the manufacture of commercial "Novacium Engineered Silicon" - based anode materials

HPQ plans to use its 3N silicon from the PUREVAP™ QRR process has the feedstock to make Novacium Engineered Silicon anode materials

SUCCESS TO DATE:

- Manufacturing 18650 industrial batteries using graphite and Novacium Engineered Silicon material for anodes
- Full scale battery testing underway, results published started Q1 2024

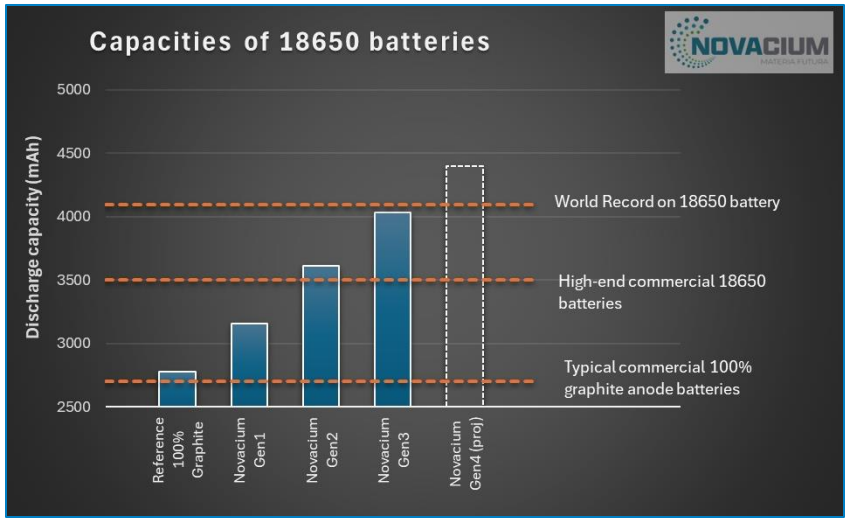
GOAL FOR FUTURE:

- Continue improving our material, our third generation (GEN3) advanced silicon-based material crack the 4,000 mAh mark
- Pilot scale Engineered Silicon materials manufacturing capability in 2025
- Commercial scale Engineered Silicon materials manufacturing capacity in 2028

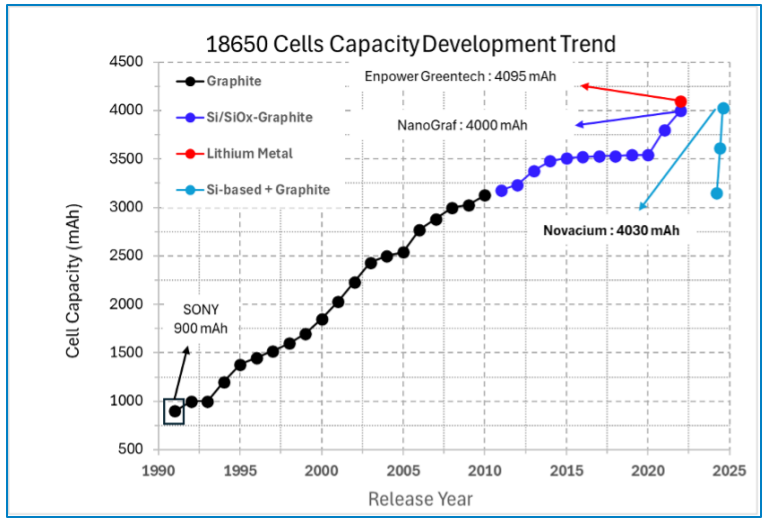
SILICON IN BATTERY ANODES: POSITIVE TEST RESULTS CONTINUE

HPQ and Novacium: rapidly developing cutting-edge advance Silicon anode materials for batteries

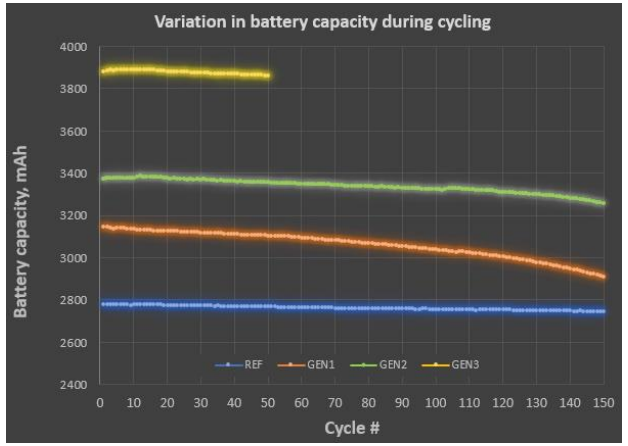
- Validating the material ability to enhances battery performance, and its seamless integration into 18650 batteries
- Test results continue to confirm materials potential

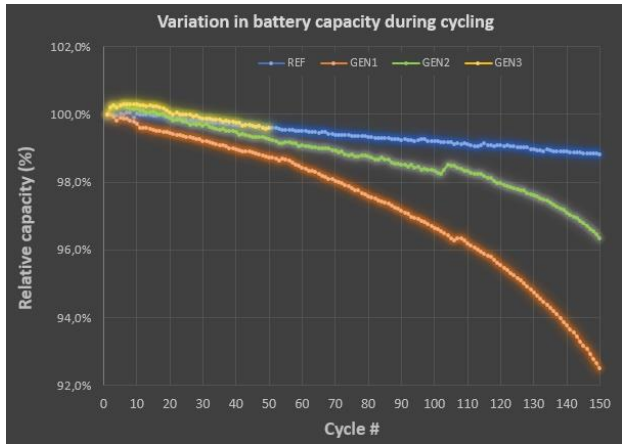


Graph 1) energy capacity of different 18650 batteries, in milliampere-hours (mAh), starting on the left with the 100% graphite benchmark batteries, moving right to Novacium materials batteries with actual GEN1, GEN2 and GEN3 results [1] and potential capacity of 18650-battery made with GEN4 materials [2].



Graph 2) Development of the capacity of 18650 lithium-ion batteries over years [2].





Graph 3 and 4) blue lines results of 100% graphite batteries, orange and green lines GEN1 and GEN 2 batteries, over 150 charge-discharge cycle testing [1] while the yellow average capacity of GEN3 batteries over 50 charge-discharge cycle testing [1]. All readings are in milliampere-hours (mAh), or in relative capacity

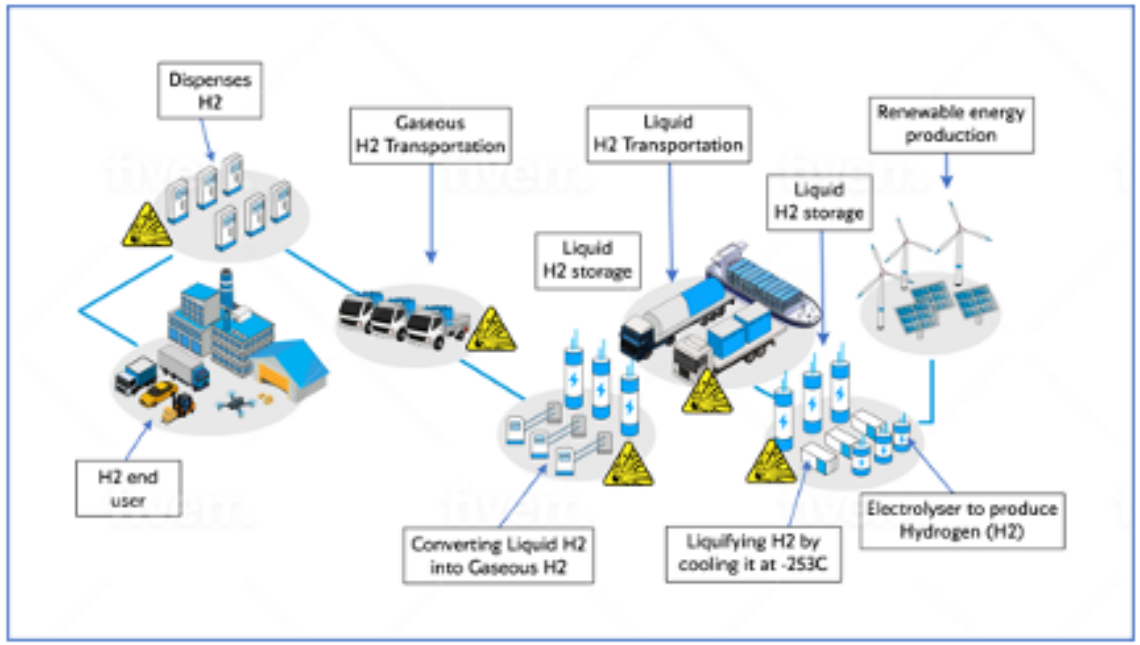
The global cell phone battery market, which is perfectly suited for our anode material, is expected to reach US$38.8 billion by 2030, growing at a CAGR of 6.4% between 2024 and 2031 [2]

HPQ SILICON

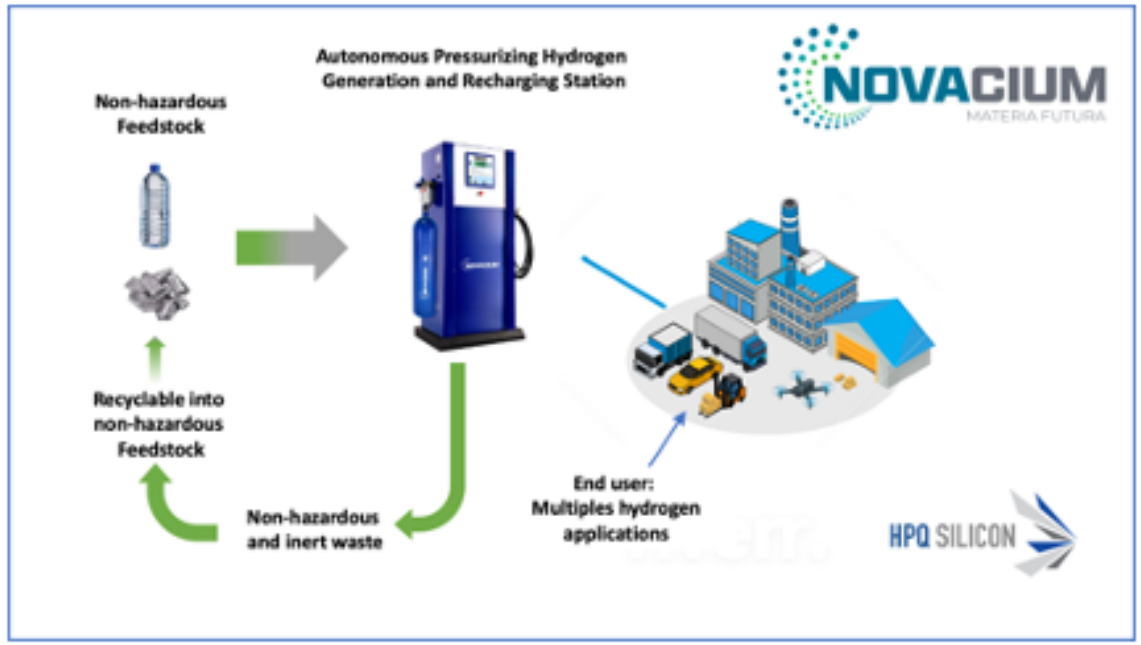
— HPQ / NOVACIUM HYDROGEN INITIATIVE

- **HARNESSING HYDROGEN POTENTIAL WHILE ELIMINATING LIMITING FACTORS**

Navigating Today Hydrogen Supply Chain:
An Expansive, Challenging and complex Journey !



Re-imagining the Hydrogen Supply Chain: Towards an Autonomous, Decentralized, and Safer Journey !



— HPQ / NOVACIUM HYDROGEN INITIATIVE

Combustible

9,5 kg/day
(6 litres)

Water (*)

18 kg/day
(18 litres)

Hydrogen

11 m^3
(1 kg/day)

By products

26,5 kg/day
(19 litres)

(*) Flexible Water source, from:

- Regular water
- Sea water
- Stale water (Gray Water), or
- Urine

First commercial prototype H2 Station :

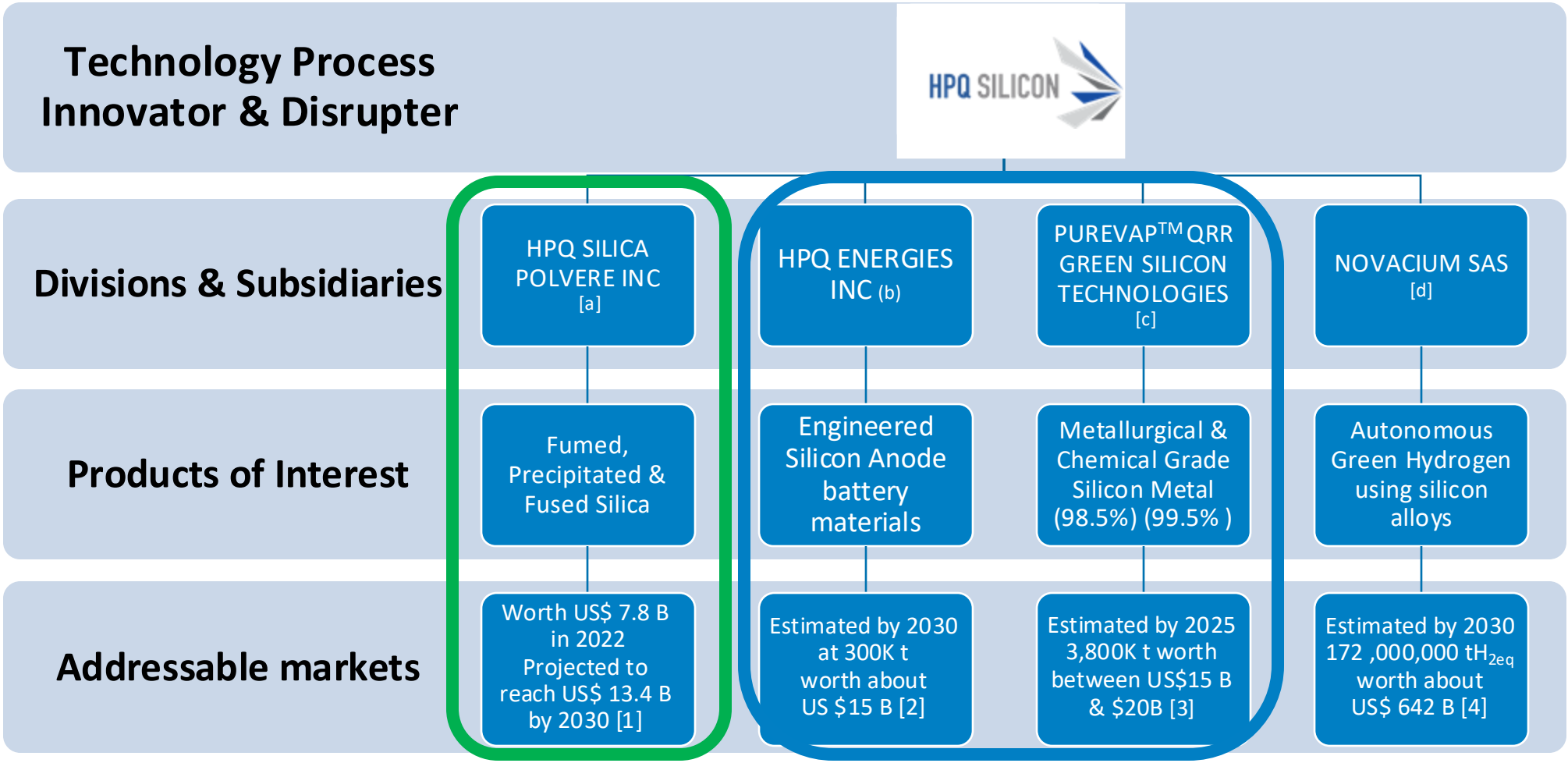
Will produce 11M^3 of Hydrogen per day

That Hydrogen can be used to generate 33 KWhr

HPQ PLAN: DEVELOP & MONETIZE NEW GREEN SILICON / SILICA TECHNOLOGIES

HPQ has successfully scaled its QRR reactor, now focused on commercializing TWO disruptive initiatives:

- Green Fumed Silica Manufacturing, in discussions with industry leaders for product development and commercialization
- Green engineered Silicon battery materials – plans to start commercializing ongoing



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  - Testing and comparing the performance of these batteries versus similar batteries made only with graphite
  - Improving the performance of our engineered SiOx batteries

03. **GREEN HYDROGEN ON DEMAND WITHOUT ELECTRICITY INITIATIVE**

- Building a first prototype for commercialization of Novacium autonomous process for making hydrogen via hydrolysis

HPQ CAPITAL STRUCTURE

Major Investors	Basic	Fully Diluted
IQ (Investissement Québec)	8.7%	8.1%
Management & Board	6.3%	10.7%
Strategic Investors	7.0%	6.1%

	52 weeks		
	Price	Low	High
(As of Aug 28, 2024)	$ 0,35	$ 0,17	$ 0,43

	Million
Basic Shares Outstanding	375.6
Options (Average Price $0.299 / Duration 4 years)	16.6
Warrants (Average Price $0.275)	6.4
Fully Diluted Shares Outstanding	398.7
Market Capitalization (Basic)	$ 131.4
Market Capitalization (Fully Diluted)	$ 139.5
Cash. Cash equivalent and in the money options and warrants	$ 5.4

— MANAGEMENT, BOARD & OTHERS

Management

- Bernard J. Tourillon, BAA, MBA
  Chairman, President, CEO and Director
- Noelle Drapeau, LLL, MBA, PMP
  Corporate Secretary and Director
- Francois Rivard
  VP, CFO
- Derick A. Lila, MSc, MA
  Director Marketing Communications

Independent Directors

- Richard Mimeau, B.Sc.
  Director
- Peter Smith, PhD, P. Eng.
  Director
- Robert Robitaille, M.B.A., L. Ph.
  Director
- Daryl Hodges H. BSc, M.Sc.
  Director
- Patrick Levasseur
  Director

Consultants

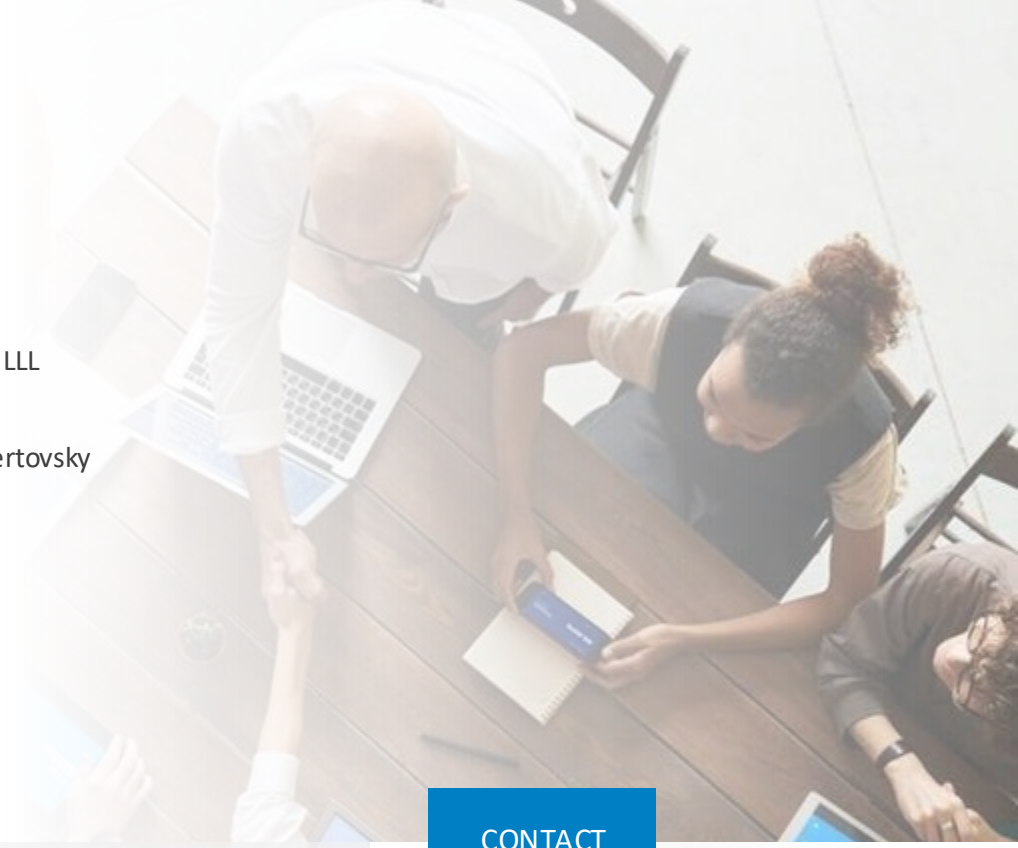
- Marcel Drapeau, BA, BSC. Comm, LLL
- PyroGenesis Canada Inc
- Karl Rheinberger and Ludmila Livertovsky

Transfer Agent

- Computershare

Auditors

- TBA



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Chairman, President and CEO
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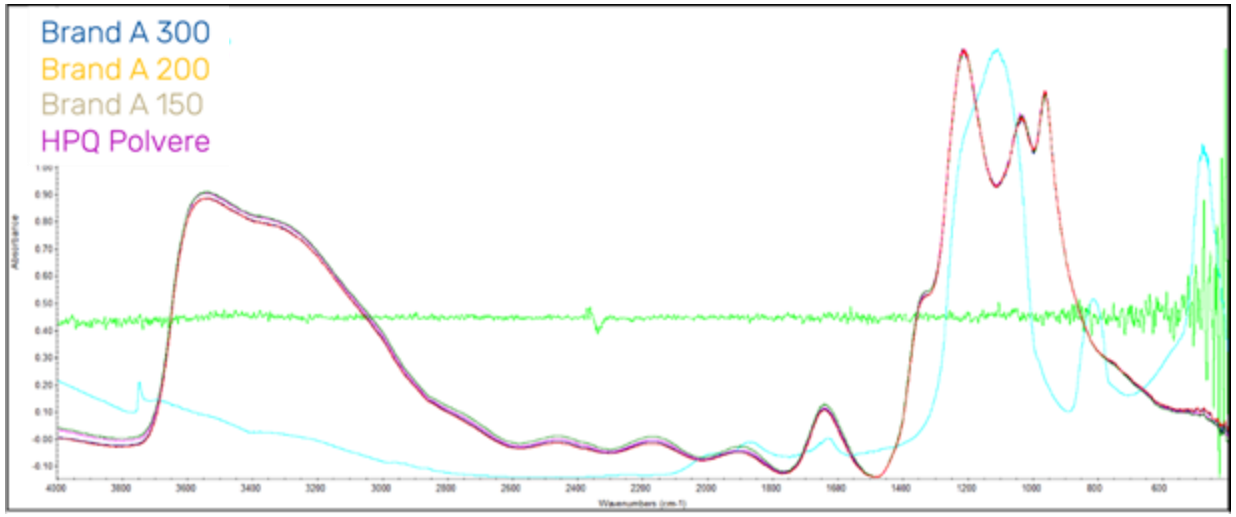
TECHNICAL APPENDIX

HPQ POLVERE FUMED SILICA MILESTONES TO DATE

- Lab scale Fumed Silica Reactor ("FSR") produced **Commercial grade fumed silica** in 2023
- HPQ Polvere has signed NDAs with three (3) major Fumed Silica participants
- Samples have been sent for analysis of **commercial potential** and feedback is very positive
- Independent testing done at McGill University
- **Key takeaway:**
  - HPQ Polvere FSR can **produce Commercial Grade Fumed Silica in one step** at lab scale
  - Chemically, HPQ material is identical to the Commercial Brand A 150, 200, and 300 products
  - **Material Rheology (strength) between Commercial brand A 150 & A 200 material but is very close to A 200**
- **Table below summarizes these key results**

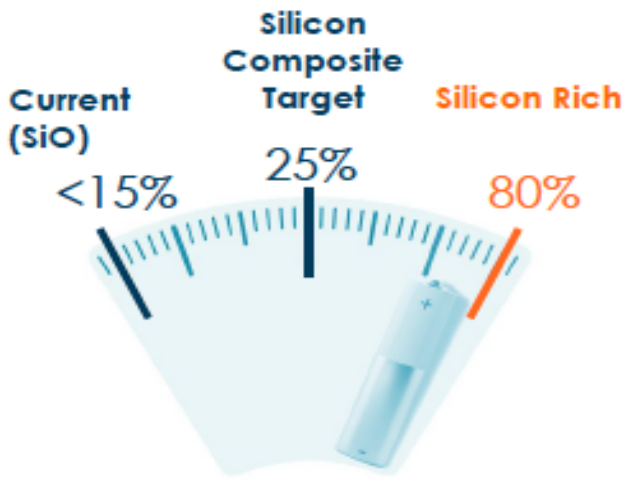
Behavior in relation to water Hydrophilic				
Test Methods	**Unit**	**Fumed Silica Commercial A**	**Fumed Silica Commercial B**	**Fumed Silica Polvere**
BET Surface Area	m^2/g	**125 – 175**	**175 – 225**	**135 – 185**
Ignition Loss (LOI)	%	**≤ 1.5**	**≤ 1.5**	**≤ 1.5**
Moisture	%	**≤ 1.5**	**≤ 1.0**	**≤ 1.0**
pH Value		**3.7 – 4.7**	**3.7 – 4.5**	**4.7 – 6.7**
HCl	%	**< 0.020**	**< 0.020**	**Nil**
Viscocity	(cP)	**27,597**	**118,000**	**90,780**
Thickening Efficiency	mPas	**Good**	**Excellent**	**Excellent**

[1]



SILICON IN BATTERY ANODES: HELPING ACCELERATE THE EV TRANSITION

Silicon content % in battery anode



New strategies and specific components **to mitigate expansion** issue

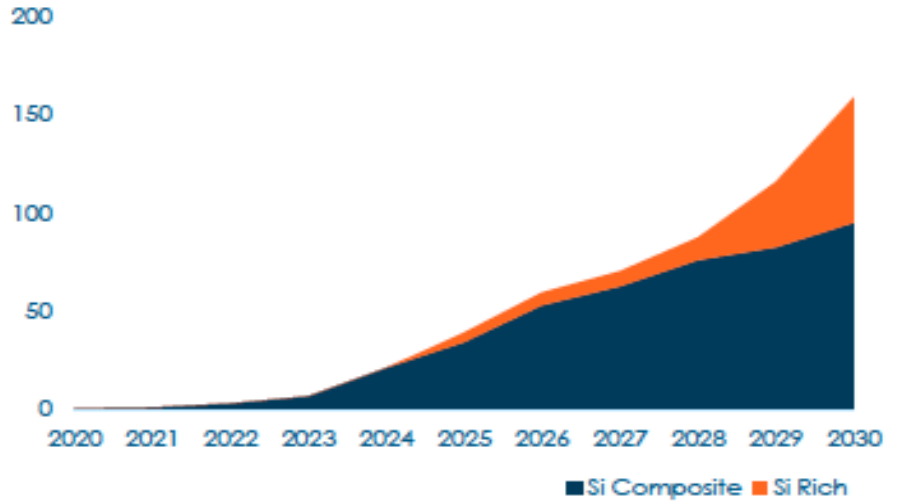
Expected **CAGR of 56% from 2023 to 2030** (excl. China)

EU and NA expected to onshore silicon supply chain

Silicon offers **lower carbon footprint** vs graphite

Silicon offers **cost advantage** vs Si containing alternatives

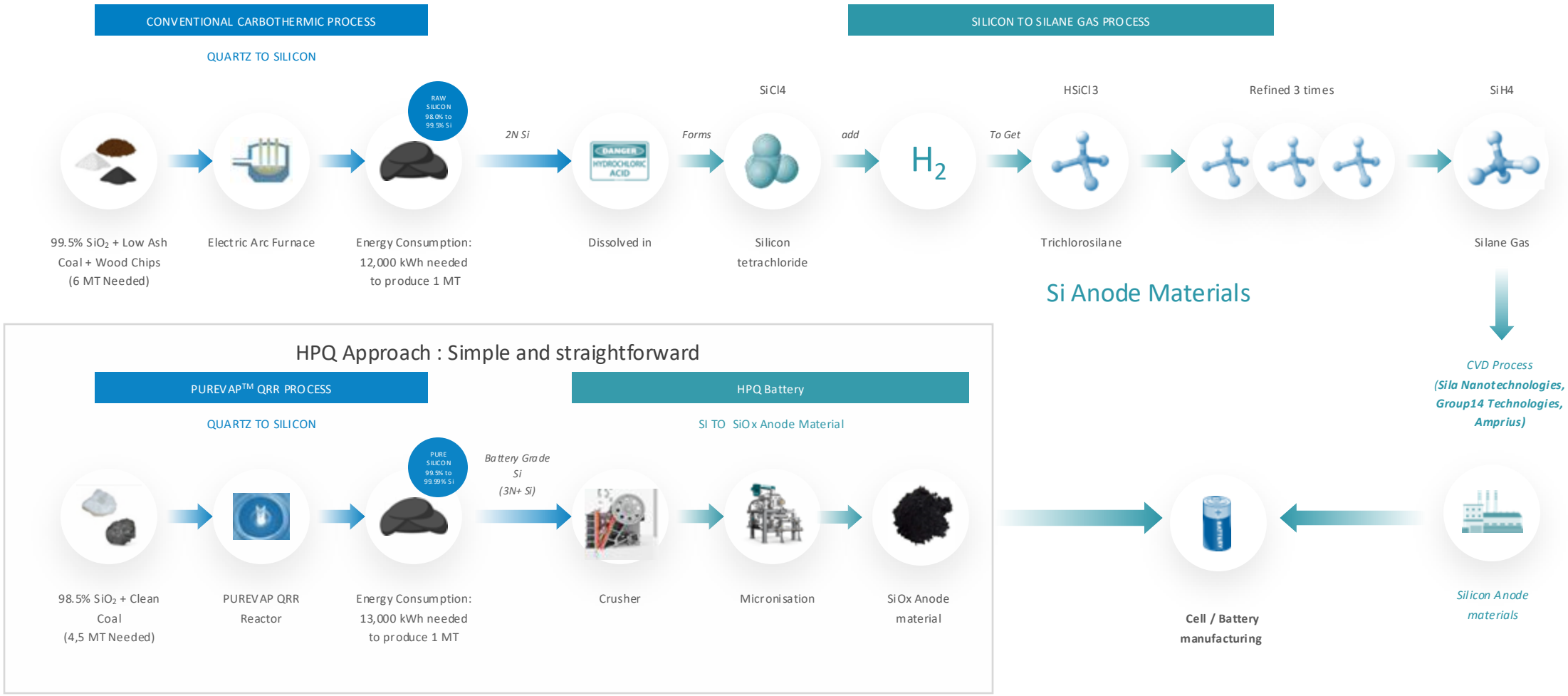
Silicon for batteries demand[1] (kt per annum)



[1]

Combining HPQ's PUREVAP™ QRR and Novacium's proprietary expertise, HPQ is well-positioned to seize this once-in-a-lifetime opportunity

— HPQ / NOVACIUM BATTERY INITIATIVE VS COMPETITION



REFERENCES & SOURCES APPENDIX

REFERENCES AND SOURCES

In the following pages, you will find supplementary information, references and/or the sources of key points made in the presentation

Page 4

[1] GML, Global Market Insight. Fumed Silica Market - By Product (Hydrophilic, Hydrophobic), By Application (Pharmaceutical, Beauty & Personal Care, Silicone Elastomers, Paints, Coatings & Inks, UPR, Adhesives & Sealants, Food & Beverages) & Global Forecast, 2024 – 2032.

[2] Strait Research Silicon Metal Market Size, Share & Trends Analysis Report By Product Form (Metallurgical, Chemical), By Application (Aluminium Alloys, Silicone, Semiconductors, Solar Panels, Stainless Steel) and By Region(North America, Europe, APAC, Middle East and Africa, LATAM) Forecasts, 2022-2030

[3] Data intelligence: Global Cell Phone Battery Market is expected to reach US$ 38.8 billion by 2030, growing with a CAGR of 6.4% during the forecast period 2024-2031.

[4] Deloitte's 2023 global green hydrogen outlook, page 13

Page 6

[1] Marketsandmarkets.com fumed silica report global forecast to 2022

[2] GML, Global Market Insight. Fumed Silica Market - By Product (Hydrophilic, Hydrophobic), By Application (Pharmaceutical, Beauty & Personal Care, Silicone Elastomers, Paints, Coatings & Inks, UPR, Adhesives & Sealants, Food & Beverages) & Global Forecast, 2024 – 2032.

Page 7

[1] Updated energy consumption estimate made by PyroGenesis Canada Inc. (August 2024)

[2] Preliminary energy consumption estimate made by PyroGenesis Canada Inc. (January 2024)

[3] Frischknecht, Rolf, et al. "Life cycle inventories and life cycle assessment of photovoltaic systems." International Energy Agency (IEA) PVPS Task 12 (2020).

Page 8

[2] Preliminary energy consumption estimate made by PyroGenesis Canada Inc. (January 2024)

[3] Updated energy consumption estimate made by PyroGenesis Canada Inc. (August 2024)

[4] Frischknecht, Rolf, et al. "Life cycle inventories and life cycle assessment of photovoltaic systems." International Energy Agency (IEA) PVPS Task 12 (2020).

[5] The 0.0136 Kg eq of CO_2 per Kg of Fumed Silica was calculated using Government of Canada data that indicate that in Quebec on average 1.7 g of CO_2 are generated eq per KWh., and multiplying that number by 8

[10] The 1 Kg eq of CO2 per Kg of Fumed Silica was calculated using Government of Canada data that indicate that in Canada on average 100 g of CO2 are generated eq per KWh., and multiplying that number by 10

[11] The 2.5 Kg eq of CO2 per Kg of Fumed Silica was calculated using Government of Canada data that indicate that in the rest of Canada, 150 g of CO2 are generated eq per KWh., and multiplying that number by 15

[12] The 0.204 Kg eq of CO2 per Kg of Fumed Silica was calculated using Government of Canada data that indicate that in Quebec on average 1.7 g of CO2 are generated eq per KWh., and multiplying that number by 12

REFERENCES AND SOURCES

In the following pages, you will find supplementary information, references and/or the sources of key points made in the presentation

Page 8 (Continued)

[13] Government of Canada

[14] The Wall Street Journal article, April 18, 2023, "World's First Carbon Import Tax Approved by EU Lawmakers"

[15] Cai, H., Wang, X., Kelly, J. C., & Wang, M. (2021). Building Life-Cycle Analysis with the GREET Building Module: Methodology, Data, and Case Studies (No. ANL/ESD-21/13). Argonne National Lab. (ANL), Argonne, IL (USA).

[16] Management has calculated the EBITDA margins from the industry data from:

i. Average EBITDA margins of 20% are derived from two sources, (https://www.chemistryviews.org/details/news/10193941/Evonik_Acquires_Huber_Silica/) and (https://corporate.evonik.com/en/investor-relations/despite-difficult-environment-third-quarter-better-than-second-225109.html).

[17] Management has calculated the EBITDA margins for the Fumed Silica Reactor (FSR) based on data derived from third party sources and publicly available information. These figures will be updated upon completion of the pilot testing phase. The 16% range in HSPI EBITDA margins takes into account estimated selling prices of the material produced and estimated costs (worst case and best case) associated with producing a Kg of Fumed Silica with the FSR

[18] The 191,500 number is derived by using the 24,000-t of Fumed Silica consumed in Canada as per (Sales data per regions from MarketsandMarkets 2017 "fumed silica market – global forecast to 2022) and multiplying that by (8-0.0136) while the number 379,000 is derived by X 24,000 @ (17-1.2).

[19] The 734,000 number is derived by by using the 92,000 -t of Fumed Silica consumed in Europe as per (Sales data per regions from MarketsandMarkets 2017 "fumed silica market – global forecast to 2022) and multiplying that by (8-0.0136) while the number 1,453,600 is derived by X 92,000 @ (17-1.2).

[20] USA EPA Greenhouse Gas Equivalencies Calculator

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[1] Management has estimated the selling price from the third-party sources and industry data. These figures will be updated when an offtake agreement has been signed

[2] According to a rough order of magnitude study by PyroGenesis, our one-step process for making Fumed Silica is estimated to cost about CAD$13 million, which equals an average Capex per kilogram of annual capacity between US$9.00 and US$10.00.

[3] Management estimate of costs of a building. Figures will be updated after pilot plant test phase.

[4] Based on PyroGenesis data

Page 10

[1] GML, Global Market Insight. Fumed Silica Market - By Product (Hydrophilic, Hydrophobic), By Application (Pharmaceutical, Beauty & Personal Care, Silicone Elastomers, Paints, Coatings & Inks, UPR, Adhesives & Sealants, Food & Beverages) & Global Forecast, 2024 – 2032.

— REFERENCES AND SOURCES

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Page 12

[1] July 2022 article by Rick Mills in .mining.com intitled Graphite deficit starting this year as demand for ev battery anode ingredient exceeds supply

[2] July 2022 article by Rick Mills in .mining.com intitled Graphite deficit starting this year as demand for ev battery anode ingredient exceeds supply

[3] The Royal Society of Chemistry 2020 Sustainable Energy Fuels, 2020, 4, 5387–5416 .

Page 14

[1] Novacium technical team analysis of the data from the ongoing charging and discharging cycle tests conducted at a world-leading university, the name of which is kept confidential for competitive reasons.

Page 17

[a] HPQ Silica Polvere Inc ("HSPI") was 100% owned HPQ subsidiary until May 2024 when PyroGenesis Canada Inc ("PCI") announced its intention to exercise its option to acquire a 50% stake in HSPI . HSPI acquired The Fumed Silica Reactor intellectual properties PCII in 2017.

[1] Fumed Silica Market Outlook (2022-2030) (https://www.factmr.com/report/2301/fumed-silica-market) Specialty Silica Market projected to reach $13.4 billion by 2030, exhibiting a CAGR of 7.0%, Says Coherent Market Insights (CMI). https://www.globenewswire.com/news-release/2023/08/03/2718371/0/en/Specialty-Silica-Market-projected-to-reach-13-4-billion-by-2030-exhibiting-a-CAGR-of-7-0-Says-Coherent-Market-Insights-CMI.html) Specialty Silica Market projected to reach $13.4 billion by 2030, exhibiting a CAGR of 7.0%, Says Coherent Market Insights (CMI). (https://www.globenewswire.com/news-release/2023/08/03/2718371/0/en/Specialty-Silica-Market-projected-to-reach-13-4-billion-by-2030-exhibiting-a-CAGR-of-7-0-Says-Coherent-Market-Insights-CMI.html)

b) HPQ Energies Inc("HPQe") formally HPQ NANO Powders Inc, is a 100% owned HPQ subsidiary that is responsible for all aspect related to silicon materials for batteries and other high value silicon materials.

[2] QY Research, SNE Research, Shinhan Securities / NBM June 2023 Deck page 11

c) PUREVAP™ QRR Green Silicon Technologies are 100% owned by HPQ. HPQ acquired the QRR Intellectual properties from PyroGenesis Canada Inc ("PCI"), subcontracted to them the R&D associated with developing the technologies, agreed to an exclusive equipment procurement deal and granted PCI a Royalty payment equal of 10%of HPQ PUREVAP™ QRR Silicon metal sales, with set minimums. HPQ is therefore financing 100% of the development cost of this technology and will collect 90% of the Silicon metal sales made with the QRR.

[3] Data compiled from information found in the presentations made by CRU International Limited ("CRU"), a world-leading metal market research firm, during their Silicon Market Outlook conferences of November 2018, November 2020, and October 2022. Information further validated by Straits ResearchSilicon Metal Market: Information by Product Type (Metallurgical and Chemical), Application (Aluminium Alloys, Silicone, and Semiconductors), and Region — Forecast till 2030, report that indicated that the global silicon metal market size was valued at USD 12.4 billion in 2021, and is expected to reach USD 20.60 billion by 2030, growing at a CAGR of5.8% during the forecast period (2022–2030).

d) Novacium SAS. In 2022, HPQ partnered with three leading French research engineers to create Novacium, a "jeune entreprise innovante (J.E.I)" based in Lyon, France, working in high-added-value material fields connected to renewable energy. Presently HPQ only owns 20% of the equity of Novacium, making Novacium an affiliated company of HPQ Silicon Inc, but accounting rules require that we consolidate Novacium operations in our financial statement.

[4] Deloitte's 2023 global green hydrogen outlook, page 13